Information Services:

A Strategic Update

for

IBM Canada

Presented to: IBM Canada

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and
Douglas H. Tayler, Director-Research

August 30, 1988

INFORMATION SERVICES
A STRATEGIC UPDATE

Topics

- About INPUT
- Information Services Forecast Methodology and Industry Structure
- Information Services Market—An Overview
- Systems Integration—Vendor Perspectives
- Systems Integration—User Perspectives

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ABOUT INPUT

Business Focus

- Planning Services for
  - Information Services Industry
  - Information Systems Executives

- Through
  - Syndicated Research
  - Proprietary Research and Consulting

Business Structure

- Independent - founded in 1974

- Offices in
  - Mountain View, California
  - Washington, D.C.
  - New Jersey
  - London
  - Paris
  - Tokyo

Staff

- Staff of 100

- Professionals
  - Average Over 15 Years IS Experience
  - Balanced Between Vendor and User

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INPUT RESEARCH ACTIVITY

IS Mgmt Interviews 4-500

Major Issue Interviews 500

IS Vendor Interviews 5-6000

Annual Assessments of:
Information Services Markets
Information Systems Trends

Annual Planning and Forecast Reports
Industry Sector Analysis
Major Issue and Technology Reports
Newsletters and Research Bulletins
Continuous Hotline Support
Conferences and Seminars
Information Centers

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INPUT RESEARCH SERVICES

- Syndicated Research
  - Market Analysis Program (MAP)
  - Market Analysis Program - Europe(SSPE)
  - Vendor Analysis Program (VAP)
  - Systems Integration Program (SIPS)
  - Federal Information Systems and Services Program (FISSP)
  - Customer Service Program (FCSP)
  - Customer Service Program - Europe (CSPE)
  - Information Systems Program (UISP)
  - Electronic Data Interchange Program (EDIS)
  - Integrated Communications Program (ICP)

- Proprietary Research and Consulting
  - Approximately One-Third of INPUT Business
  - Primarily Client Related
  - Research Driven Consulting
  - Support Strategic and Tactical Decisions

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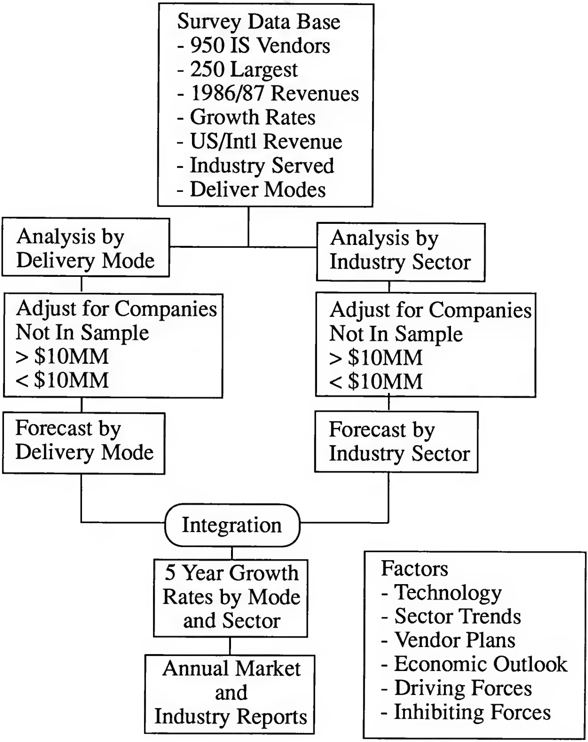
INFORMATION SERVICES

Forecast Methodology



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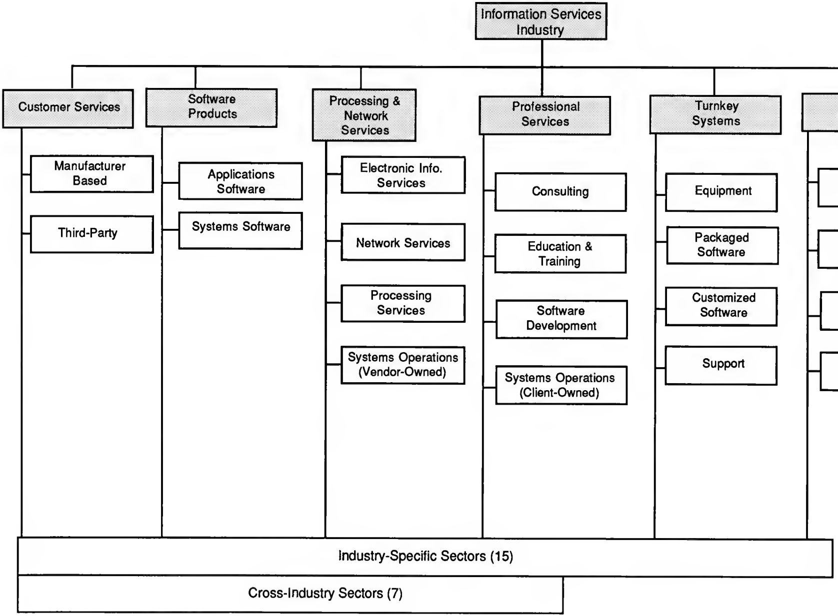
INFORMATION SERVICES INDUSTRY STRUCTURE 1988



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Information Services Market—

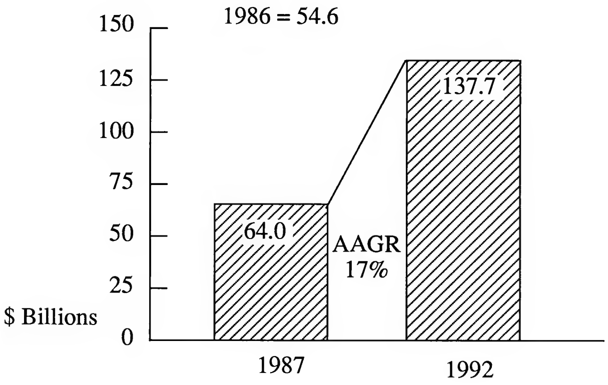
An Overview

INFORMATION SERVICES MARKET

1987 - 1992

- Customer Services
- Software Products
- Processing and Network Services
- Professional Services
- Turnkey Systems
- Systems Integration

INFORMATION SERVICES MARKET



Does Not Include Customer Services Market—$17 Billion 1987
$29 Billion 1992

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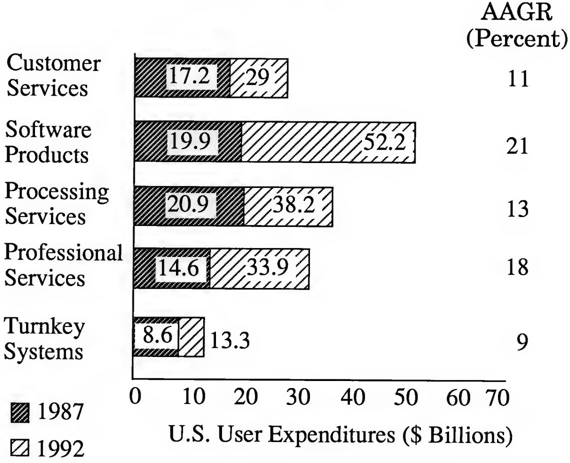
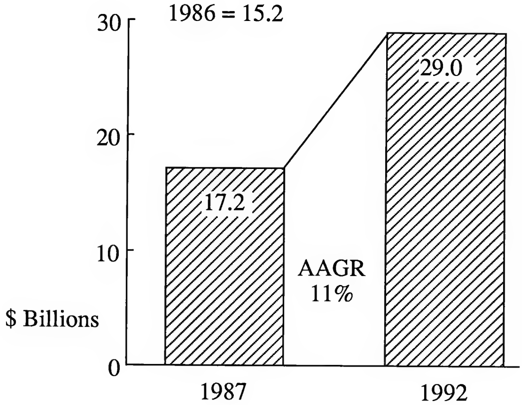
INFORMATION SERVICES INDUSTRY BY DELIVERY MODE



CUSTOMER SERVICE USER EXPENDITURES



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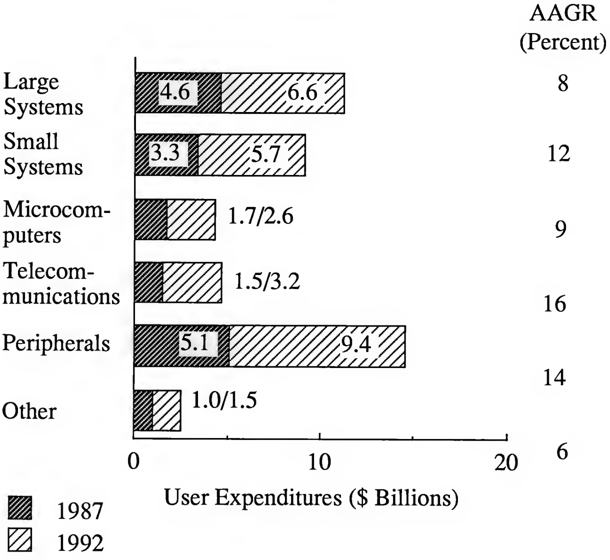
CUSTOMER SERVICE USER EXPENDITURES 1987-1992



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CUSTOMER SERVICE MARKET

Leading Service Vendors

Rank	Vendor	1987 Service Revenue ($MM)	Service as a Percent of Total Revenues	1986-1987 Service Growth (Percent)
1	IBM	3688[1]	15	(8)
2	Digital[2]	3135	33	26
3	UNISYS	3002	31	44
4	NCR[3]	1952	35	13
5	Hewlett-Packard	1731	21	17

1. US only - worldwide revenues are 7691.

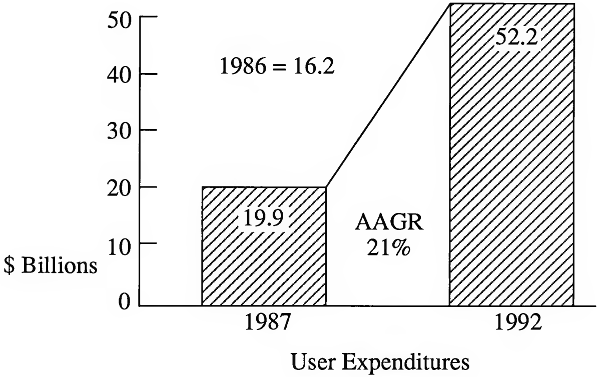
2. Includes software support and consulting, customer training, and replacement parts.

3. Includes hardware maintenance, software support, custom programs and processing services.

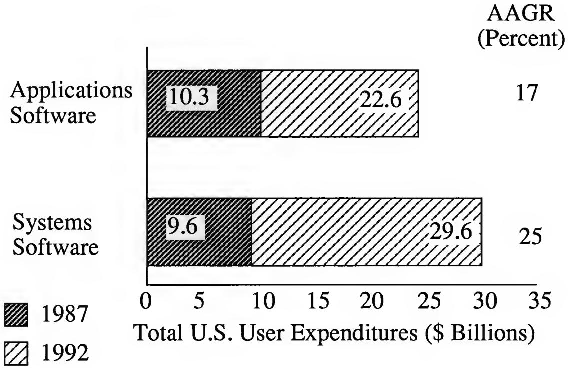
CUSTOMER SERVICES MARKET

- A $16-17 Billion Industry in 1987
- Growth is Continuing to Slow Due to Competition, Pricing Strategies and Improved Hardware Reliability
- TPM's Feeling Pressure, Merging to Survive and Grow
- Automated Delivery of Service Becoming More Common
- Professional Services Opportunities Exist
- Documentation Remains Biggest Problem
- IBM's CSA/MRSA Have Huge Impact on Market Practices and Pricing

SOFTWARE PRODUCTS MARKET



SOFTWARE PRODUCTS MARKETS



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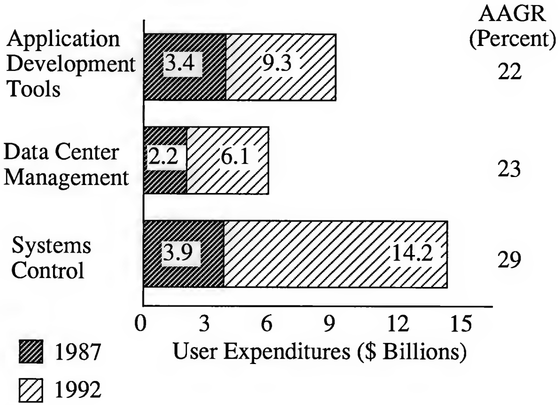
TOTAL SYSTEMS SOFTWARE MARKET BY SOFTWARE TYPE, 1987-1992



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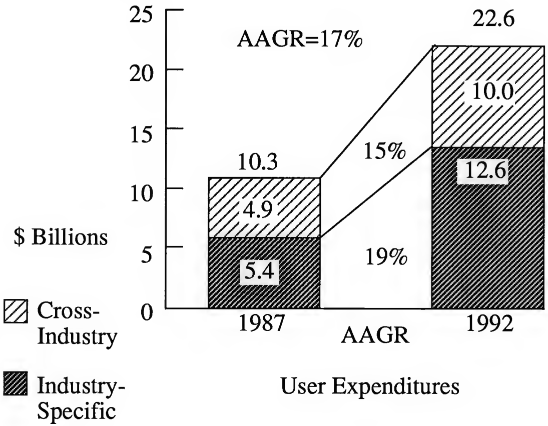
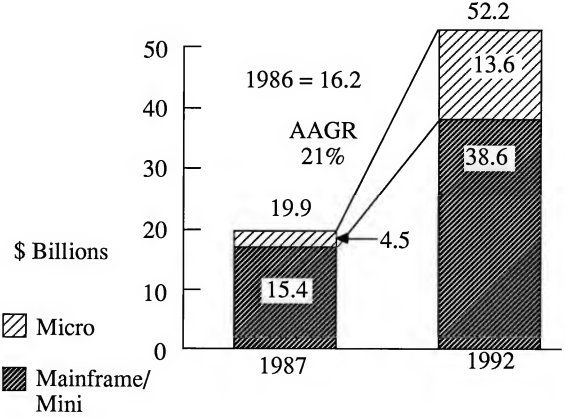
INDUSTRY-SPECIFIC APPLICATIONS SOFTWARE TO INCREASE SIGNIFICANTLY



SOFTWARE PRODUCTS MARKET FORECAST, MAINFRAME/MINI AND MICRO: 1987-1992



SOFTWARE PRODUCTS MARKET

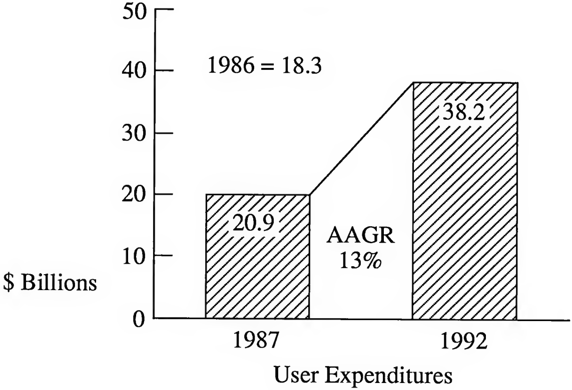
Trends

- Driving Forces
  - Workstation Power
  - Required Application Complexity
  - Networking Demands
  - Cooperative Processing and LANS
  - Relational and Distributed Data Base Technology
  - SAA

- Inhibiting Forces
  - Mature Mainframe Market
  - Declining Price per Copy
  - Absorption
  - Competitive Practices and Pricing
  - Workstation - Minicomputer Shakeout
  - AS/400 Impact on DBMS Placements

- Growth Areas
  - CASE
  - Executive Information Systems
  - IMAGE Processing
  - Relational Data Base Management Systems
  - Knowledge Base Tools
  - Object Oriented Technology

PROCESSING/NETWORK SERVICES MARKET



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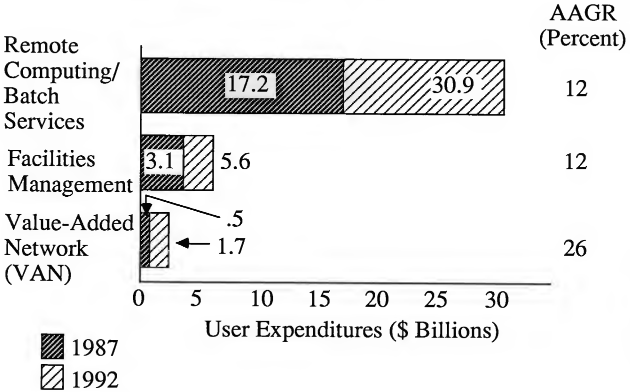
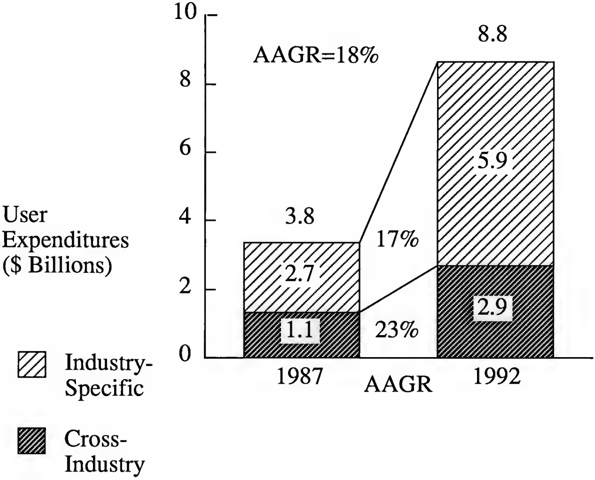
PROCESSING/NETWORK SERVICES MARKETS, 1987-1992



ONLINE DATABASE MARKET SIZE 1987-1992



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PROCESSING & NETWORK SERVICES

Trends

- Mature Market
  - Few Competitive Changes
  - Cost of Entry High
- On-Line Data Base Segment Experiencing Strong Growth
  - CD-ROM Impact Unclear
- EDI Evolving Quickly
- Steady Growth
  - Network/Transaction Processing Growth Increasing
  - Batch Processing Growth Slowing

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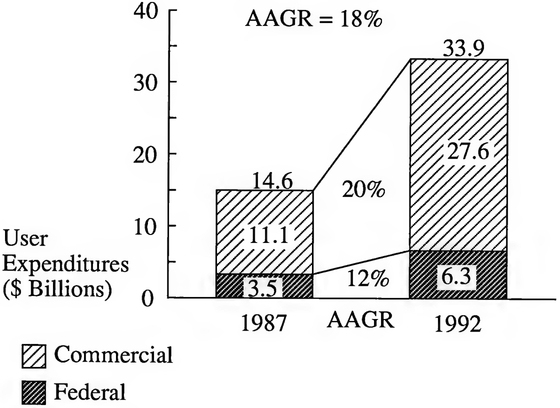
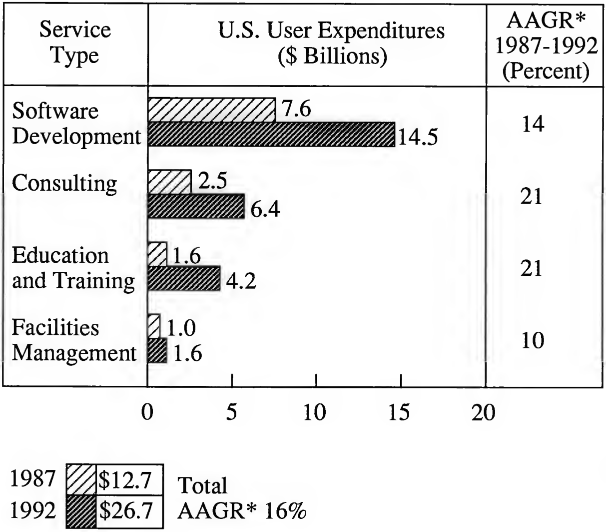
PROFESSIONAL SERVICES MARKET USER EXPENDITURES BY SEGMENT 1987-1992



CONTRACT SERVICES MARKET
BY MODE
1987-1992



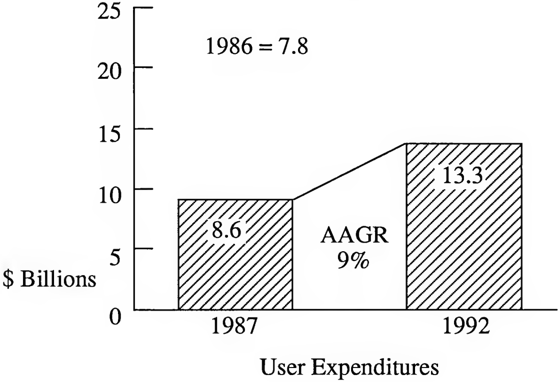
* Average Annual Growth Rate

PROFESSIONAL SERVICES MARKET

Trends

- Differentiation Phase
  - New Markets Emerging
  - Cost of Entry Not Excessive
  - High Growth Rate
  - People Intensive
- Specialization Increasing
- Distribution Potential
- Product Sophistication
- Impact on and from Systems Integration

TURNKEY SYSTEMS MARKET



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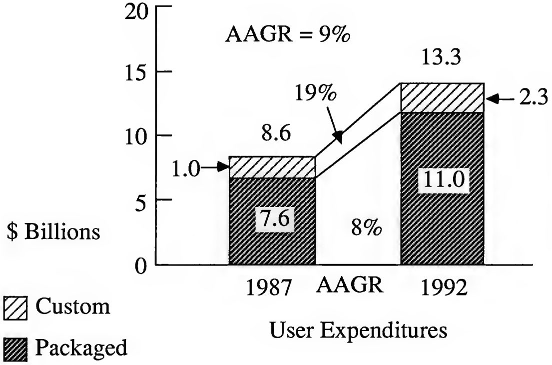
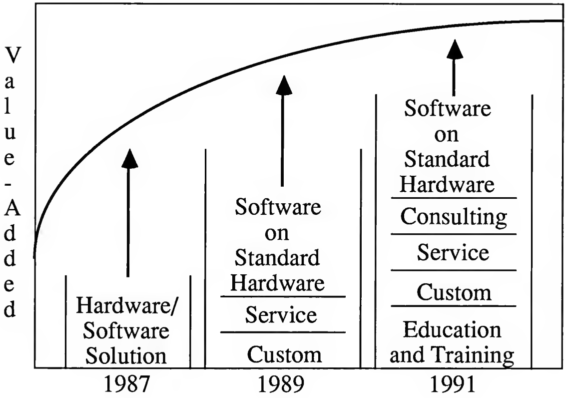
CUSTOM VS. PACKAGED TURNKEY SYSTEMS MARKET, 1987-1992



VALUE-ADDED SERVICES IN THE FUTURE



TURNKEY SYSTEMS MARKET

Trends

- Saturation Phase
  - Tough Market
  - Cost of Customization
  - Growth Slowing
- Hardware Vendors Providing Total Solutions
- Hardware Profit Contribution Declining
- Hardware Vendors Competing on Hardware Portion
- Customizing Potential
- Cash/Balance Sheet Requirements for Prime Contracting
- Micro-based Solutions Impacting Minicomputers
- Support Revenues Vital to Survival
- Migration to "Software or Services" Company

INFORMATION SERVICES MARKET

1987 - 1992

- Customer Services Market Growth Modest and Declining
- Software Products Market Experiencing Strong Growth
- Processing Services Market Experiencing Steady Growth with Some Strong Segments
- Professional Services Market Experiencing Strong Growth
- Turnkey Market Growth Modest and Declining
- Changing Market Structure Indicates Changing Buyer Environment